Installation Instructions SZ329, SZ330 and SZ331

Ground screw with screwed on upper part SZ118, for SCHATTELLO

The following instructions include all information necessary for the correct mounting and operation of your MAY screw-in ground anchor. For absolute safety, please read these instructions carefully and then keep them for later reference.

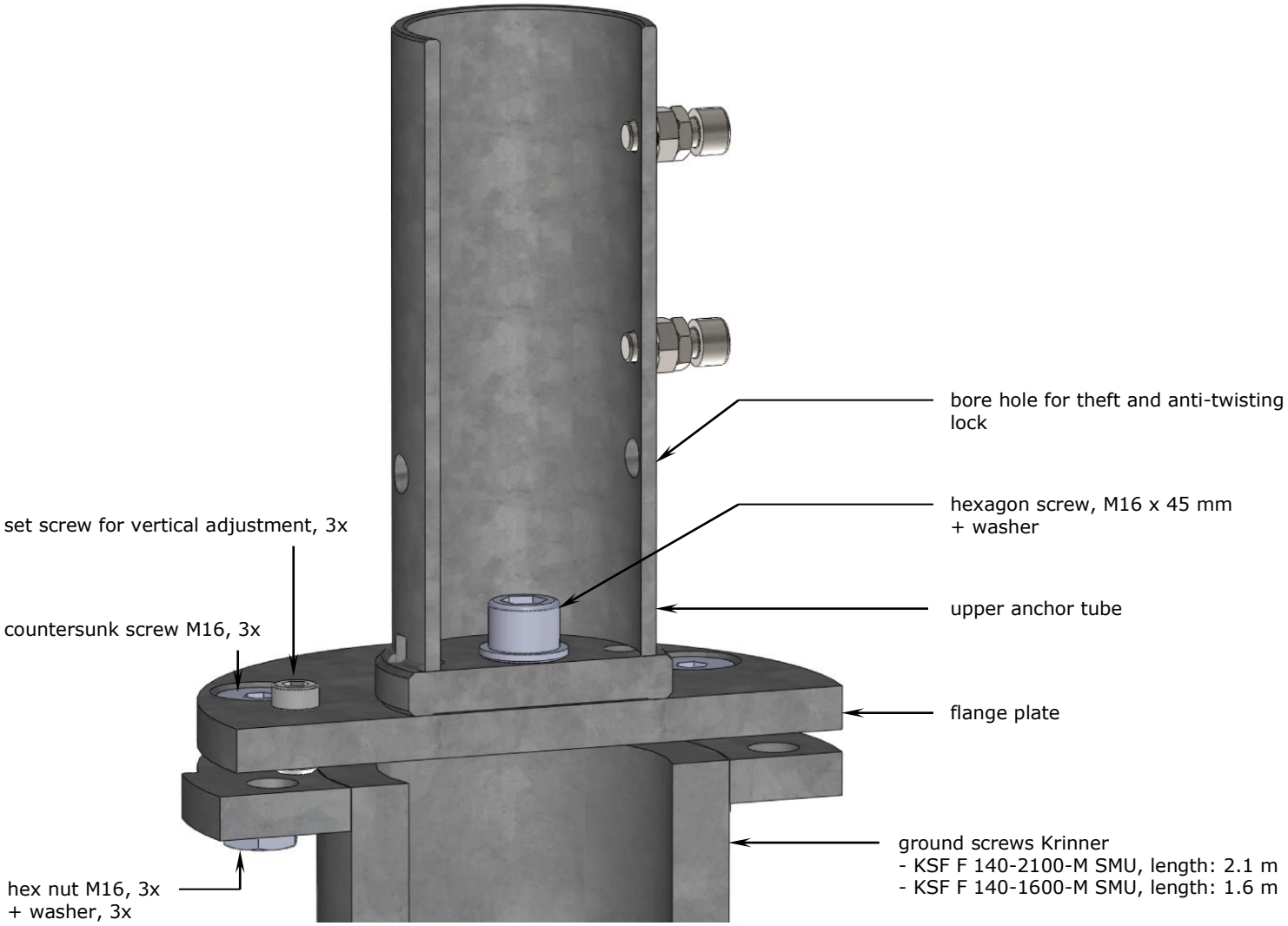
Caution

Non- observation of operating instructions can result in personal injuries or damage to property.

Please note that if these instructions are not observed, the manufacturer cannot assume any liability or guarantee.

- Always follow the safety regulations.
- Should you not understand any part of these operating instructions, please contact your MAY dealer.

Mounting drawing



Service: Installation of ground screw

Preconditions:

- SZ329 / SZ330 / SZ331 must be purchased (upper tube and ground screw).

- Make sure there are no pipes, tubes, gas pipes, water or power supply in the ground. The property owner / customer must sign the foundation installation conditions (you will find the template on the last page of these instructions). By this written confirmation, the buyer / customer assumes liability and duty of care.

- There must be free access to the installation area.

1. Check online where to find the next available Krinner sales partner (go to https://www.schraubfundamente.de/en/kontakt/regions/ and enter your postal code).

2. Contact your Krinner sales representative and clarify the installation. Optimally forward this instruction manual (digital version available) and ask for your individual offer, possibly a quote with hourly rate and call-out charge.

3. Your Krinner sales partner must view the terrace and identify the soil class by a test drilling. The soil class must not exceed class 4, down to 2.1 m below ground level (length of the ground screw). This helps to clarify whether the KR E 20 screwing machine is suitable or whether a larger machine must be used. This soil analysis is only binding in case of a homogeneous soil fabric.

4. This manual illustrates the "5 steps to fasten the ground screw". As soon as the SZ329 / SZ330 / SZ331, the ground screw and the MAY parasol has been delivered to the terrace, the service technician can start with the installation according to step 1, 2 and 3. Main tools required: Screwing machine KR E 20, hammer drill, a ø 40 x 800 mm rock drill, a Krinner screw-in attachment F1234567, a 1.2 m ground screw and in case of multiple parasols an optical level. In order to coordinate this project, it is recommended to have a MAY representative on site.

Placing the ground screw

1. Allow sufficient space between parasols or between the wall of the house and the parasol.

Caution

Parasols that are located too close together wear sooner.

Parasols may sway slightly. If there is not enough space between them, they may touch and abrade or scour the canopy fabric at the spoke ends.

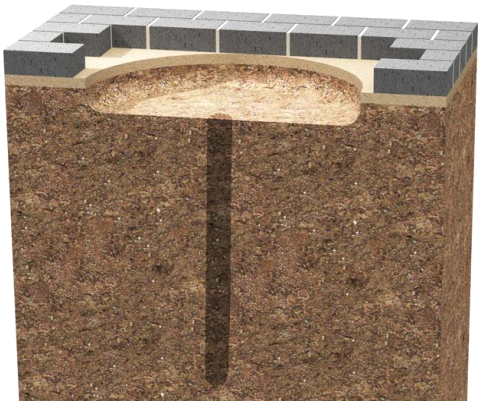
- Make sure that there is a clearance of approx. 20 cm between the parasols (or between parasol and the wall of the house).

2. Note that uneven patios are no problem. We are able to compensate any unevenness of the ground by adjusting the height of each individual parasol. Extra-length upper tubes are available at 10 cm gradation. These can be adjusted in height on location with the help of inside spacers. Instructions: may.ag/extralength.pdf

5 steps to fasten the ground screw

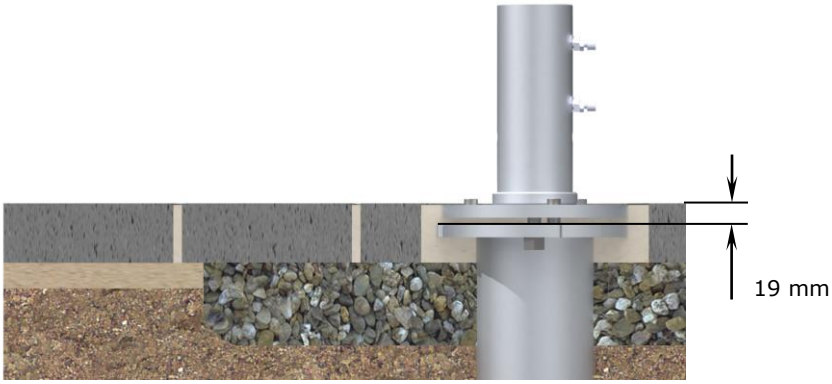
Preliminary, let the property owner / customer sign the foundation installation conditions (see last page) and archive it legally.

1. Step 1: Removal and primary drilling
   Remove paving and gravel until a depth of approximately 15 cm. Use a ø 40 mm drill for the vertical predrill. Pay attention to the chapter "Placing the ground screw".



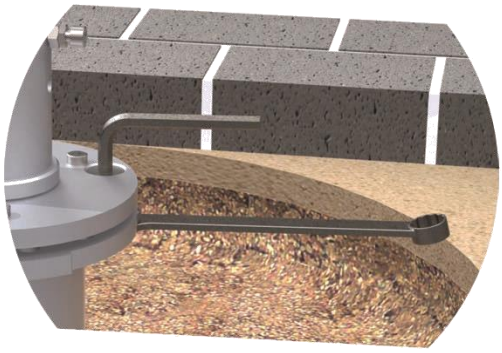
2. Step 2: Preparation
   For preparation for the 2.1 m ground screw a smaller ground screw, about 1.2 m long, must be screwed-in and out again.

3. Step 3: Screwing-in
   Screw-in the 2.1 m ground screw until there is a space of 19 mm between top of terrace and top of ground screw. This ensures the winter coverage will be even with the ground. In case of multiple parasols use an optical level to have all ground screws screwed-in to the same depth.



Step 4 and 5 and the erection of the parasol must be carried out by your MAY dealer.

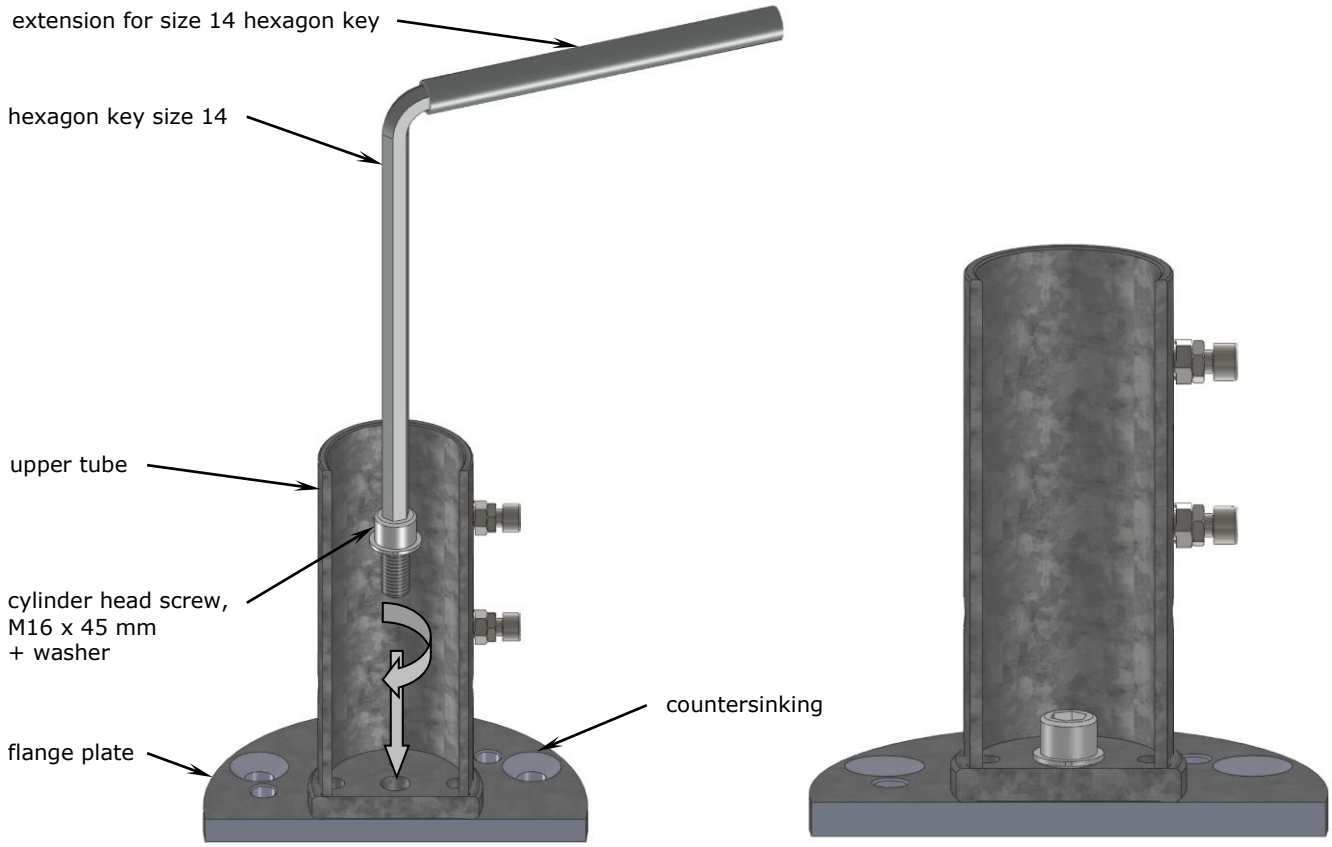
4. Step 4: Alignment
   See chapter „Alignment and fixation of upper anchor tube“ for detailed instruction.



5. Step 5: Finish
   Fill up the gravel and place the paving as close as possible to the flange. That way the ground screw disappears completely below the pavement.

Alignment and fixation of upper anchor tube

1. Attach the 16 mm washer onto the M16 cylinder head screw and tighten it to fix the upper tube onto the flange plate, the countersinking must face upward (cf. illustration). Use the enclosed size 14 hexagon key with extension.



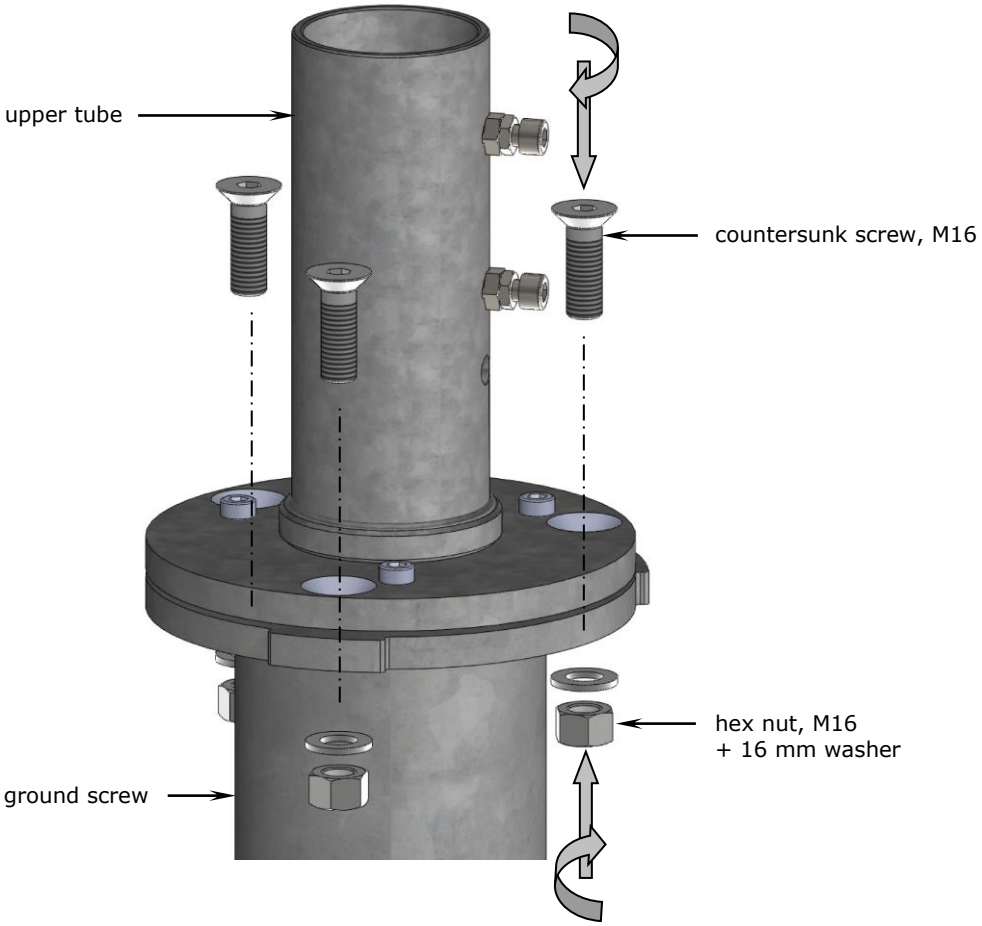
Caution

Screws that are not tightened correctly will work loose.

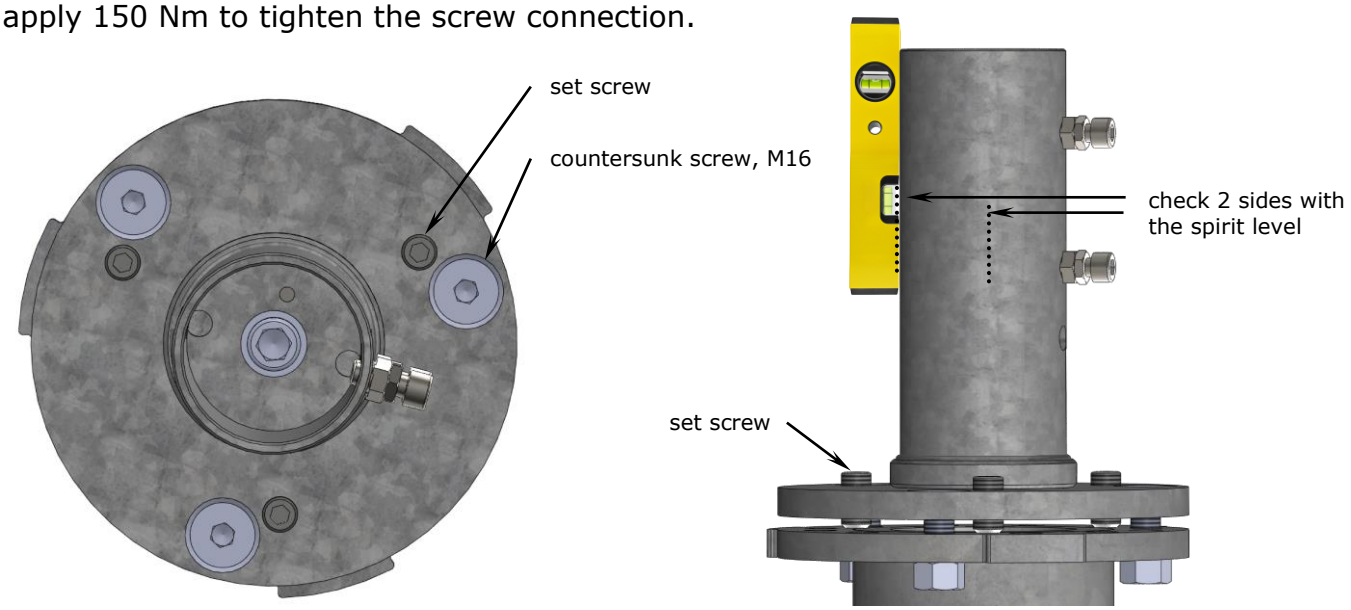
If screws are not tightened firmly enough, there will not be sufficient tensile force to trigger self-locking. If the screws are tightened too firmly and over-stressed, the screw connection may slacken.

- Tighten the M16 screw manually using the enclosed hex key and extension. Exert as much force as possible. With the enclosed tools there is virtually no risk of over-stressing.
- The correct torque for a torque wrench is 210 Nm.

2. Insert the M16 countersunk screws into the bore holes of the coupling plate and so screw the upper tube with coupling plate onto the flange plate (cf. illustration). Attach the hex nuts from the bottom. Do not tighten the screw connection firmly yet.



3. As a practical matter, the ground screw is never screwed in 100% straight. Therefore, the upper part must be aligned with a water spirit level (cf. illustration). Adjust the set screw and the M16 screw as long as your spirit level indicates that the plate is horizontal. Then apply 150 Nm to tighten the screw connection.



Storage / dismounting

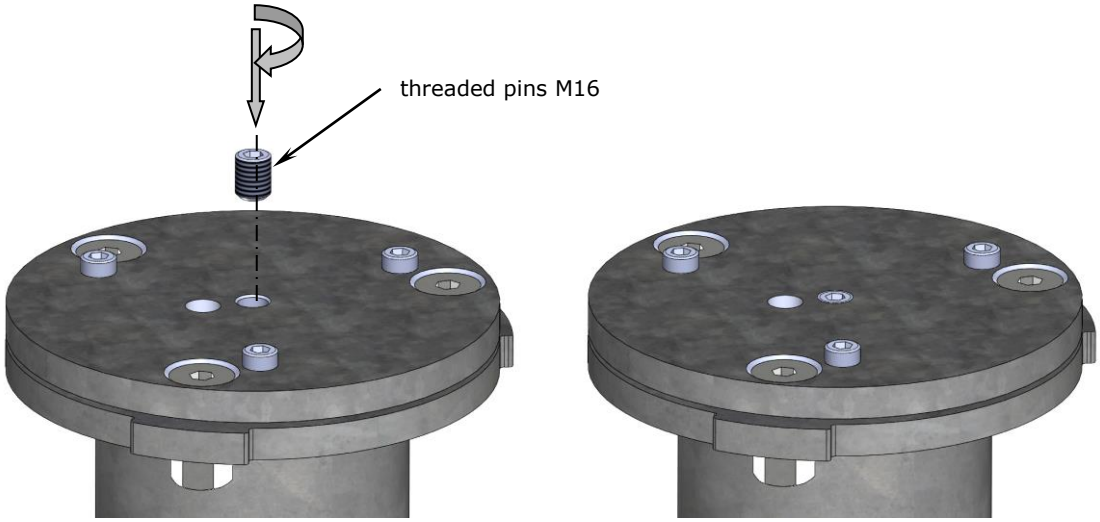
1. Lift the parasol from the anchor tube.
2. Remove the upper anchor tube completely.
3. Screw threaded pins into the bore holes flush with the plate (cf. illustration).

Caution

The thread may get damaged.

Without cover plate, dirty water or sand may be washed into the flanks of the thread. As sand is harder than steel, the thread may get damaged when the screw is turned.

- Screw in the threaded pins flush with the plate.



4. In case you have two or more parasols, each parasol and its corresponding accessories should be marked during dismounting (with punch marking or waterproof marker, e.g. for winter storage).

Tip

Marking saves a lot of time and helps to keep things in order.

If clearly marked, each parasol can easily be assigned to its proper location and re-erected parallel to the wall of the house or next to the others.

- For clear and easy later assignment use the same number to mark the centre pole, the upper anchor tube and the lower anchor tube. For example, for parasol No. 1, all three parts should carry number 1, all three parts of parasol No. 2 should be marked with a 2, etc.

5. Lubricate the screws on a regular basis to prevent rust.

Mounting – Tools required

1. SZ329 / SZ330 / SZ331 (upper anchor tube + ground screw by Krinner) including MAY standard parts.
2. Hammer drill with ø40 rock drill.
3. Krinner screw-in machine KR E 20, telescopic guiding rod system, guiding safety bar, screw-in attachment F1234567.
4. Cable reel
5. 1.2 m ground screw
6. Spade, shovel, small trowel
7. Spirit level + tape measure (possibly)
8. Folding rule
9. Hexagon key in size 3, 4, 8 and 14
10. Open-ended spanner size 17 + 19
11. Ring spanner size 24
12. In case of multiple parasols: optical level, ground marking spray, centring plate for rock drill and soil spikes for fixation (custom made).

Foundation installation conditions

Before installation of a ground screw, a foundation installation condition sheet must be signed. This template is a translation of a year 2011 copy from the Krinner company. If applicable, please request an updated version. A signed copy should be archived by the "ground screw service".

Project: _____

Scheduled date: _____ Scheduled time: _____

- The points of installation have been checked and are free of obstacles such as ground cables or underground constructions.
- The points of installation are marked and levelled.
- Cable diagrams are available.
- It is confirmed there are no underground cables (gas pipes, water, telephone, power supply, etc.) within a radius of 50 cm around the point of installation.
- There must be free access for the installation machines to the points of installation plus 3m x 3m around, installation points must be marked.
- In case the start of construction cannot be met as scheduled, please inform us 2 working days ahead.

paved ground _____ ☐ yes ☐ no
tarred ground _____ ☐ yes ☐ no
underground construction/waste _____ ☐ yes ☐ no

Soil class: _____

Terrain characteristic: _____

_____

_____

Installation of ground screws into a rocky ground or into a rock, removal of paving and core drilling though asphalt are available at special service.

Further information: _____

_____

_____

Remark: In case of swampy ground, increased groundwater level, flood, muddy ground caused by strong rain or ground frost, ground screws cannot be installed. The offered price applies to the specified service. Any additional effort or service must be invoiced based on hourly rate. If during assembly it turns out that the installation of the ground screws cannot be conducted or only with excessive material and cost expenditure, we are not obliged to provide any service at these positions. This does not affect any further parts of the contract. The German law on contracts for work & services (BGB), current version, applies.

Warranty: Warranty excluded in case of natural changes of the ground like sinking, landslide, flood, earthquake.

_____ _____

Date Signature customer, stamp